

4 WETLANDS

Wetland assessments are performed in accordance with DOE's "Compliance with Floodplain/Wetlands Environmental Review Requirements" rule (10 CFR Part 1022). The requirements for review are established in Executive Order 11990, *Protection of Wetlands*, issued on May 24, 1977. The wetland delineation method used for the 1992 EIS/EIR (DOE 1992) was that from the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (Federal Interagency Committee for Wetlands Delineation 1989).

This evaluation is based on a review of draft NEPA documentation and documentation of consultations with the U.S. Fish and Wildlife Service regarding wetlands issues at LLNL.

Wetlands

- ◆ 1992 EIS/EIR: Wetlands at the Livermore site and at Site 300 are not expected to be affected by proposed activities.
- ◆ 1992–1997: Wetlands in Arroyo Las Positas at the Livermore site expanded. Wetlands at Site 300 potentially affected by water diversions were maintained by supplementation with drinking water.
- ◆ 1998–2002: Maintenance of the floodway in Arroyo Las Positas at the Livermore site would disturb approximately 20% of associated wetlands each year. However, wetland vegetation would be maintained, and impacts to the California red-legged frog would be mitigated. No other proposed activities would affect wetlands. Supplementation of the EIS/EIR for wetlands is not needed.

4.1 THE 1992 EIS/EIR ASSESSMENT

The 1992 EIS/EIR identified the location and extent of wetlands at both the Livermore site and Site 300 as of 1991. Floodplains were delineated on the basis of studies by the Federal Emergency Management Agency, site surveys, and hydrologic modeling. Wetland delineation was accomplished by surveys of floodplain areas, drainageways, and constructed water features. The 1992 EIS/EIR concluded that wetlands at the Livermore site were located away from any planned development related to the proposed action and would not be impacted by it.

At the time the 1992 EIS/EIR was issued, Site 300 contained numerous small, isolated wetlands. The sources of these wetlands were natural springs, runoff from Site 300 buildings, and a seasonal temporary pool. The nature, extent, and vegetation of each wetland were mapped. Total wetland area at Site 300 was 6.76 acres. The EIS/EIR concluded that most of the activities associated with the proposed action would not affect Site 300 wetlands, but that reduction or elimination of surface runoff from some cooling towers would result in the elimination of 0.5 acre of artificial wetlands. Mitigation for loss of these wetlands would be determined in consultation with the California Department of Fish and Game, in consideration of the State of

California's policy of no net loss of wetlands. The groundwater restoration project at Site 300 was mentioned as one possible source for artificial wetland replacement. The 1992 proposed action included clearing 2.4 acres of upland habitat, which would not have any impact on natural wetlands. Some artificial wetlands might be affected.

4.2 CHANGES FROM 1992 TO 1997

After the 1992 EIS/EIR was issued, the wetlands associated with the Arroyo Las Positas at the Livermore site expanded, as predicted in 1992, because of both groundwater remediation activities ("pump and treat" runoff) and a period of wetter weather. An August 1997 survey identified approximately 2 acres of wetland vegetation associated with the arroyo. In addition, other small wetland areas associated with other drainage channels developed on site.

At Site 300, a few new wetlands have been discovered since 1992. Discharges from some cooling towers have been redirected to percolation pits, eliminating some surface drainage that encouraged development of wetland vegetation. Any wetland areas created by water diversions have been maintained by supplementation with potable water.

4.3 ANALYSIS OF PROJECTED CHANGES FROM 1998 TO 2002

In 1997, LLNL proposed a maintenance project to remove and prevent further development of accumulated debris in the Arroyo Las Positas channel. Wetland vegetation has choked the channel so that it is no longer capable of carrying a 100-year storm event. LLNL has proposed to construct a berm on a portion of the southern side of the arroyo to protect the developed portions of the Livermore site. During storm events, water could be diverted into the undeveloped LLNL buffer zone to the north, which is part of the 500-year floodplain. Wetland vegetation in the arroyo would remain largely intact, and a program of removing silt and vegetation has been developed to maintain at least a 10-year storm drainage capacity. In any given year, 20% of the wetland vegetation in the arroyo might be disturbed by the maintenance activities.

A draft DOE EA for the Arroyo Las Positas Maintenance Project is in review. DOE also prepared a BA as required by Section 7(a)(2) of the Endangered Species Act. The BA was forwarded to the FWS in August 1997, and the FWS issued a BO in October 1997 (FWS 1997). Because the scope of the maintenance project was recently revised, DOE prepared an amended BA, which was submitted to the FWS on June 26, 1998. The FWS issued a revised BO in August 1998 (FWS 1998). The amended BO identifies mitigation measures that are required for protection of wetland habitat and protection of the California red-legged frog (see Section 3).

4.4 CONCLUSIONS

The proposed management of flood capacity and sediments in Arroyo Las Positas was not included in the 1992 EIS/EIR. Although some vegetation would be disturbed, such management would not result in a reduction in the size or elimination of this wetland. LLNL has consulted with appropriate agencies, as required by law, and mitigation measures have been approved by FWS for reducing and compensating for potential impacts to the California red-legged frog (see Section 3). The mitigation plan includes scheduling activities to avoid involvement with the California red-legged frog, protecting habitat for the California red-legged frog, and compensating for any incidental take of individual frogs. Impacts related to Arroyo Las Positas are not considered significant for the purposes of this SA because (1) arroyo management would continue to maintain the wetland, (2) issues regarding federally listed species are being resolved with the appropriate regulatory authority, and (3) mitigation measures for minimizing potential impacts have been developed. For these reasons, supplementing the EIS/EIR for wetlands is not needed.

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